

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number
WO 2005/054338 A1

(51) International Patent Classification⁷: **C08G 73/02**,
H01B 1/12

(21) International Application Number:
PCT/CA2004/002083

(22) International Filing Date: 6 December 2004 (06.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/526,603 4 December 2003 (04.12.2003) US

(71) Applicant (for all designated States except US): **UNIVERSITY OF MANITOBA** [CA/CA]; 631 Drake Centre, Winnipeg, Manitoba R3T 5V4 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DEORE, Bhavana, A.** [CA/CA]; 631 Drake Centre, Winnipeg, Manitoba R3T 5V4 (CA). **YU, Insun**, [CA/CA]; 631 Drake Centre, Winnipeg, Manitoba R3T 5V4 (CA). **FREUND, Michael, S.** [CA/CA]; 631 Drake Center, Winnipeg, Manitoba R3T 5V4 (CA).

(74) Agent: **ADE & COMPANY**; 1700-360 Main Street, Winnipeg, Manitoba R3C 3Z3 (CA).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A SWITCHABLE SELF-DOPED POLYANILINE

(57) Abstract: A substituted polyaniline whose self-doped state can be controlled via complexation between boronic acid groups along the backbone with D-fructose in the presence of fluoride is described. For the first time, this allows the formation of a water-soluble, self-doped conducting polymer under the polymerization conditions. In turn this facilitates the growth of polyaniline over a wider pH range



WO 2005/054338 A1